

Claims

1. A method for wireless data transfer between a first multimedia device (CAMC) and a second multimedia device (TV), which first multimedia device (CAMC) and second multimedia device (TV) are connected via a wireless connection that is operated according to a first wireless standard (BT) or to
5 a second wireless standard (IEEE802.11b), which first wireless standard (BT) and second wireless standard (IEEE802.11b) are different from and/or not compatible with each other, said method comprising the following steps:
- an application data receiving step in which application commands (BT-AC), application parameters (BT-AP) and/or application data (BT-AD) of
10 said first wireless standard (BT) are received from an application (113) of said first multimedia device (CAMC),
 - a connection layer processing step (119) in which said application commands (BT-AC), application parameters (BT-AP) and/or application data (BT-AD) are processed in order to obtain respective connection commands
15 (BT-CC), connection parameters (BT-CP) and/or connection data (BT-CD) of said first wireless standard (BT),
 - a choosing step in which said first wireless standard (BT) or said second wireless standard (IEEE802.11b) is chosen as chosen wireless standard,
 - 20 - an adaptation layer processing step in which said connection commands (BT-CC), connection parameters (BT-CP) and/or connection data (BT-CD) are processed in order to obtain processed connection commands (IEEE802.11b-CC), processed connection parameters (IEEE802.11b-CP) and/or processed connection data (IEEE802.11b-CD) of said chosen
25 wireless standard (IEEE802.11b; 802.11a; BT), and
 - a sending step in which said processed connection commands (IEEE802.11b-CC), processed connection parameters (IEEE802.11b-CP) and/or processed connection data (IEEE802.11b-CD) are sent out via said wireless connection (IEEE802.11b-WC) according to said chosen wireless
30 standard (IEEE802.11b; 802.11a; BT).
2. A method for wireless data transfer between a first multimedia device (TV) and a second multimedia device (CAMC), which first multimedia device (CAMC) and second multimedia device (TV) are connected via a wireless
35 connection that is operated according to a first wireless standard (BT) or to a second wireless standard (IEEE802.11b), which first wireless standard

(BT) and second wireless standard (IEEE802.11b) are different from and/or not compatible with each other, said method comprising the following steps:

- a transmission data receiving step in which transmitted wireless data (IEEE802.11b-TD) are received that have been transmitted via said wireless connection (IEEE802.11b-WC) according to a chosen wireless standard that is said first wireless standard (BT) or said second wireless standard (IEEE802.11b),

- an adaptation layer processing step in which said transmitted wireless data (IEEE802.11b-TD) are processed in order to obtain connection commands (BT-CC), connection parameters (BT-CP) and/or connection data (BT-CD) of said first wireless standard (BT),

- a connection layer processing step (119) in which said connection commands (BT-CC), connection parameters (BT-CP) and/or connection data (BT-CD) of said application wireless standard (BT; UDP/TCP-IP) are processed in order to obtain respective application commands (BT-AC), application parameters (BT-AP) and/or application data (BT-AD) of said first wireless standard (BT),

- an application data processing step in which said application commands (BT-AC), application parameters (BT-AP) and/or application data (BT-AD) are provided to an application (113) of said first multimedia device (TV).

3. Method according to any one of the preceding claims, **characterized in that** a switching of said chosen standard from said first wireless standard (BT) to said second wireless standard (IEEE802.11b) is performed by

- opening a new and temporary additional wireless connection between said first multimedia device (CAMC) and said second multimedia device (TV) operating according to said second wireless standard (IEEE802.11b),

- choosing said second wireless standard (IEEE802.11b) as chosen wireless standard,

- operating said new wireless connection as said wireless connection.

4. Method according to any one of the preceding claims, **characterized in that** said method for wireless data transfer realizes a point-to-point connection between said first multimedia device (CAMC) and said second multimedia device (TV).

5. Method according to any one of preceding claims, **characterized in that** said adaptation layer processing step is performed within an adaptation layer (117).

5 6. Method according to any one of the preceding claims, **characterized in that** said chosen wireless standard (IEEE802.11b; 802.11a; BT) is different from and/or not compatible with said first wireless standard (BT), such that a standard conversion is performed within said adaptation layer processing step.

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7. Method according to any one of the preceding claims, **characterized in that** said chosen wireless standard (IEEE802.11b; 802.11a; BT) is chosen (203, 204; 303, 304) depending on properties of said wireless connection (IEEE802.11b-WC), the distance between said first multimedia device (CAMC) and said second multimedia device (TV), and/or depending on direct requests from said application (113).

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8. Method according to any one of the preceding claims, **characterized in that** said chosen wireless standard (IEEE802.11b; 802.11a; BT) is chosen (203, 204; 303, 304) depending on the battery condition of said first multimedia device (CAMC) and/or depending on the battery condition of said second multimedia device (TV).

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9. Method according to claim 7 or 8, **characterized in that** said properties of said wireless connection (IEEE802.11b-WC) comprise signal strength, quality of service, energy efficiency, and/or the like.

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10. Method according to any one of claims 7 to 9, **characterized in that** said distance between said first multimedia device (CAMC) and said second multimedia device (TV) is determined based on positioning system data (GPS).

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11. Method according to any one of claims 7 to 10, **characterized in that** said choosing of said chosen wireless standard (IEEE802.11b; 802.11a; BT) is performed by a management unit (121; 301).

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12. Method according to any one of the preceding claims, **characterized in that** said first multimedia device is a video camcorder (CAMC) and said second multimedia device is a data processing means (TV).

13. Method according to claim 12, **characterized in that** said data processing means is a personal computer, a notebook, a video recorder, a television set (TV), a personal digital assistant (PDA), a portable phone, a stereo headphone, and/or a mobile video viewer.

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14. Method according to any one of claims 9 to 13, **characterized in that** said management unit (121; 301) informs said application (113) which chosen wireless standard (IEEE802.11b; 802.11a; BT) is chosen and said application (113) adjusts the bit rate of said application data (BT-AD) depending on said chosen wireless standard (IEEE802.11b).

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15. Method according to any one of the preceding claims, **characterized in that**

- said first wireless standard and said second wireless standard are any of the following standards: IEEE 802.11a, IEEE 802.11b, Bluetooth (BT), or ZigBee, or IEEE802.15.3; and

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- said connection commands, connection parameters, and/or connection data correspond to any of the following standards: UDP/TCP, Bluetooth (BT).

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16. Wireless data transfer system which is capable of and/or has means for performing or realizing a method for wireless data transfer according to any one of the preceding claims 1 to 15 and/or the steps thereof.

17. Computer program product comprising computer program means adapted to perform and/or to realize a method for wireless data transfer according to any one of the claims 1 to 15 and/or the steps thereof, when it is executed on a computer, a digital signal processing means, and/or the like.

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18. Computer-readable storage medium comprising a computer program product according to claim 17.

19. A multimedia device (CAMC; TV) that is connected with a further multimedia device (TV; CAMC) via a wireless connection that is operated according to a first wireless standard (BT) or to a second wireless standard (IEEE802.11b), which first wireless standard (BT) and second wireless standard (IEEE802.11b) are different from and/or not compatible with each other, which multimedia device (CAMC; TV) comprises:

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- a connection layer (119) adapted for receiving application commands (BT-AC), application parameters (BT-AP) and/or application data (BT-AD) of said first wireless standard (BT) from an application layer (117), and further adapted for processing said application commands (BT-AC), application parameters (BT-AP) and/or application data (BT-AD), thus generating respective connection commands (BT-CC), connection parameters (BT-CP) and/or connection data (BT-CD) of said first wireless standard (BT),
- a choosing unit adapted for choosing said first wireless standard (BT) or said second wireless standard (IEEE802.11b) as chosen wireless standard,
- an adaptation layer (117) adapted for processing said connection commands (BT-CC), connection parameters (BT-CP) and/or connection data (BT-CD) thus generating processed connection commands (IEEE802.11b-CC), processed connection parameters (IEEE802.11b-CP) and/or processed connection data (IEEE802.11b-CD) of said chosen wireless standard (IEEE802.11b; 802.11a; BT),
- sending means (120) for sending out said processed connection commands (IEEE802.11b-CC), processed connection parameters (IEEE802.11b-CP) and/or processed connection data (IEEE802.11b-CD) via said wireless connection (IEEE802.11b-WC) according to said chosen wireless standard (IEEE802.11b; 802.11a; BT), and
- a management unit (121, 301) adapted for choosing said chosen wireless standard (IEEE802.11b; 802.11a; BT) depending on signal strength, quality of service and/or the like of said wireless connection, the distance between said multimedia device (CAMC; TV) and said further multimedia device (TV; CAMC), and/or depending on direct requests from said application (113).

20. Method according to claim 19, **characterized in that** said chosen wireless standard (IEEE802.11b; 802.11a; BT) is different from and/or not compatible with said first wireless standard (BT), and said adaptation layer (117) is adapted for performing a standard conversion.

21. Multimedia device according to claim 19 or 20, **characterized in that** said multimedia device (CAMC; TV) is a video camcorder (CAMC), personal computer, notebook, video recorder, television set (TV), personal digital assistant (PDA), or a portable phone.